





QUALITY CERTIFICATE

Vessel NORMAN MCLEOD
Customer SPRAGUE ENERGY
Operation ANALYSIS

Port Date Terminal PORTSMOUTH, NH April 23, 2003 SPRAGUE ENERGY Report

PL03-230

Reference

Sample # 367269

Name of material being tested Description of sample source Samples Drawn by (company) Samples Tested by (company)

#6 FUEL OIL

TANK 1
INSPECTORATE AMERICA
INSPECTORATE AMERICA

Tests being Performed	Test method	Sample Source
GRAVITY, API	ASTM D 4052	11.1
FLASH POINT, F.	ASTM D 93B	200+
SULPHUR, % WT.	AVERAGE	1.82
/ISCOSITY, SSF, 122F	ASTM D 445/2161	169.0
POUR POINT, F.	ASTM D 97	42.8
WATER & SEDIMENT, % VOL.	ASTM D 976	0.1
ASH, % WT.	ASTM D 482	0.068
ASPHALTINES, %WT	IP 143	6.95
TU'S PER POUND	ASTM D 4868	18,305
TU'S PER GALLON	CONVERSION	151,273
VANADIUM, PPM	IP 95	14
SODIUM, PPM	IP 95	10
NITROGEN, %WT	ASTM D 3228	0.388
CARBON RESIDUE % WT.	ASTM D 4530	9.73
SULPHUR, % WT.	ASTM D 4294	
	UPPER	1.90
	MIDDLE	1.78
	LOWER	1.78

Inspectorate America Corp (Portland Me.)

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